

AMENDMENT TO THE CLAIMS

1-5. (Canceled)

6. (Currently amended) A first-in, first-out memory device comprising:

a ring buffer, which acts as one ring, having a plurality of address locations for storing incoming data;

a first boundary pointer for indicating an end point of a first buffer area formed within said ring buffer into which said incoming data can be stored;

a second boundary pointer for indicating an end point of a second buffer area formed within said ring buffer into which said incoming data can be stored; [[and]]

a first read pointer, coupled to said ring buffer, for indicating a read address of said first buffer area;

a first write pointer, coupled to said ring buffer, for indicating a write address of said first buffer area;

a second read pointer, coupled to said ring buffer, for indicating a read address of said second buffer area;

a second write pointer, coupled to said ring buffer, for indicating a write address of said second buffer area; and

a controller for adjusting the value of said first boundary pointer and said second boundary pointer in accordance with the amount of incoming data to be stored,

wherein said first read pointer, first write pointer, second read pointer and second write pointer are separated from said first boundary pointer and said second boundary pointer, and

each of said first read pointer, first write pointer, second read pointer, second write pointer, said first boundary pointer and said second boundary pointer, is capable of changing in a circulating fashion within the plurality of address locations of the ring buffer.

7-8. (Canceled)

9. (Previously presented) The first-in, first-out memory of claim 6, wherein said controller operates to move said first boundary pointer and said second boundary pointer so as to increase the size of said first buffer and said second buffer on the basis of a 1:1 correspondence with the amount of incoming data.

10. (Original) The first-in, first-out memory of claim 6, wherein said controller dynamically varies the value of said first boundary pointer and said second boundary pointer during operation in response to the amount of said incoming data to be stored.

11-15. (Canceled)

16. (Currently amended) A method of storing data in a first-in, first-out memory device, said method comprising the steps of:

defining a ring buffer, which acts as one ring, having a plurality of address locations for storing incoming data;

defining a first boundary pointer for indicating an end point of a first buffer area formed within said ring buffer into which said incoming data can be stored;

defining a second boundary pointer for indicating an end point of a second buffer area formed within said ring buffer into which said incoming data can be stored; [[and]]

defining a first read pointer for indicating a read address of said first buffer area;

defining a first write pointer for indicating a write address of said first buffer area;

defining a second read pointer for indicating a read address of said second buffer area;

defining a second write pointer for indicating a write address of said second buffer area; and

adjusting the value of said first boundary pointer and said second boundary pointer in accordance with the amount of incoming data to be stored,

wherein said first read pointer, first write pointer, second read pointer and second write pointer are separated from said first boundary pointer and said second boundary pointer, and

each of said first read pointer, first write pointer, second read pointer, second write pointer, said first boundary pointer and said second boundary pointer, is capable of changing in a circulating fashion within the plurality of address locations of the ring buffer.

17-18. (Canceled)

19. (Previously presented) The method of storing data in a first-in, first-out memory of claim 16, wherein said first boundary pointer and said second boundary pointer are adjusted so as to increase the size of said first buffer and said second buffer on the basis of a 1:1 correspondence with the amount of incoming data.

20. (Original) The method of storing data in a first-in, first-out memory of claim 16, wherein said first boundary pointer and said second boundary pointer are dynamically varied during operation in response to the amount of said incoming data to be stored.

21. (Canceled)